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THYRATRON MERCURY-VAPOR TRIODE

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DATA**Electrical:****Heater, for Unipotential Cathode:**

Voltage* 5.0 volts
Current 4.5 amp

Direct Interelectrode Capacitance:

Grid to Anode (Approx.) 4.4 μ f
Peak Voltage Drop 16 volts

Approximate Control Characteristics:

Anode Voltage . . . 60 100 1000 volts
Grid Voltage 0 -1.75 -6.5 volts
Ionization Time (Approx.) 10 μ seconds
Deionization Time (Approx.) 1000 μ seconds

Mechanical:

Mounting Position Vertical, Base Down
Overall Length 7" \pm 1/4"
Seated Length 6-3/8" \pm 1/4"
Maximum Diameter 3"
Bulb ST-23
Cap Medium
Base Medium 4-Pin Bayonet

Maximum Ratings, Absolute Values:

PEAK FORWARD ANODE VOLTAGE 1000 max. volts
PEAK INVERSE ANODE VOLTAGE 1000 max. volts
GRID VOLTAGE:
Before Conduction -500 max. volts
During Conduction -10 max. volts
INSTANTANEOUS ANODE CURRENT:
Below 25 Cycles 5 max. amp
25 Cycles and Higher 15 max. amp
AVERAGE ANODE CURRENT** 2.5 max. amp
SURGE ANODE CURRENT for 0.1 sec. max. 200 max. amp
INSTANTANEOUS GRID CURRENT 1.0 max. amp
AVERAGE GRID CURRENT** 0.25 max. amp
COND.-MERCURY TEMPERATURE RANGE Δ 40-80 $^{\circ}$ C

* Heater voltage must be applied at least 5 minutes before anode voltage is applied.

** Averaged over any 15-second interval.

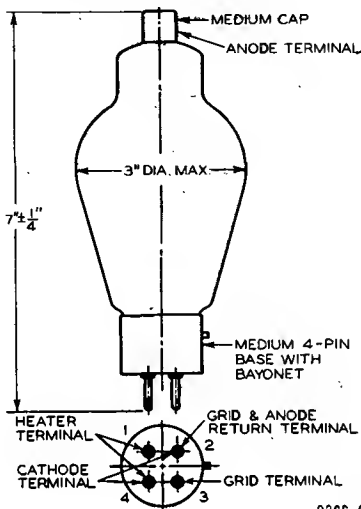
Δ Recommended Condensed Mercury Temperature 40 $^{\circ}$ C.

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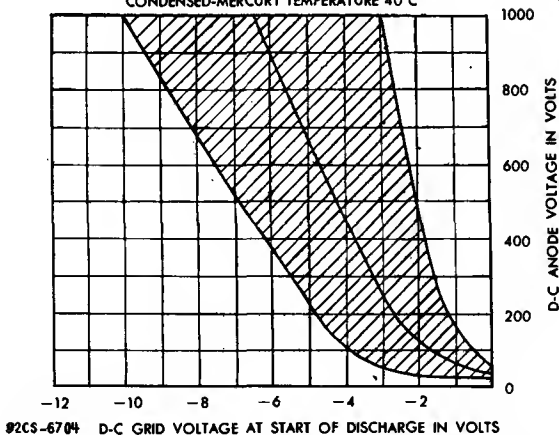
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THYRATRON



92CS-6743

TYPICAL CONTROL CHARACTERISTICS
 SHADED AREA SHOWS RANGE OF CHARACTERISTICS
 CONDENSED-MERCURY TEMPERATURE 40°C



MAY 1, 1946

TUBE DIVISION
 RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-6743-6704



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THYRATRON

MERCURY-VAPOR TRIODE

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Electrical:

Heater, for Unipotential Cathode:

Voltage. 5.0 volts

Current. 4.5 amp

Cathode:

Minimum Heating Time, prior

to tube conduction . . . 5 minutes

Direct Interelectrode Capacitances (Approx.):

Grid to Anode. 2.5 μ lfGrid to Cathode. 10 μ lfIonization Time (Approx.). . . 10 μ secDeionization Time (Approx.) 1000 μ sec

Anode Voltage Drop (Approx.) 16 volts

Grid-No.1 Control Ratio (Approx.) with grid-No.1
resistor (megohms) = 0 220

Mechanical:

Mounting Position. Vertical, Base Down

Overall Length 7" \pm 1/4"Seated Length. 6-3/8" \pm 1/4"

Maximum Diameter 3"

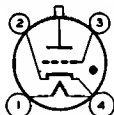
Bulb ST-23

Cap. Medium

Base Medium-Shell Small 4-Pin, Bayonet

Basing Designation for BOTTOM VIEW 4BL

Pin 1-Heater

Pin 2-Cathode;
Circuit
Returns

Pin 3-Grid

Pin 4-Heater,
Cathode
Cap-Anode

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:

Forward. 1000 max. volts

Inverse. 1000 max. volts

GRID VOLTAGE:

Before Conduction. -500 max. volts

During Conduction. -10 max. volts

CATHODE CURRENT:

Peak 15 max. amp

Average**. 2.5 max. amp

Fault, for 0.1 sec. maximum. 200 max. amp

GRID CURRENT:

Average**. +0.25 max. amp

COND.-MERCURY TEMPERATURE RANGE[▲] +40 to +80 °C

OPERATING FREQUENCY. 150 max. cps

** Averaged over any interval of 15 sec. max.

▲ Recommended operating temperature is 40°C.

← Indicates a change.

MARCH 1, 1951

TUBE DEPARTMENT

DATA

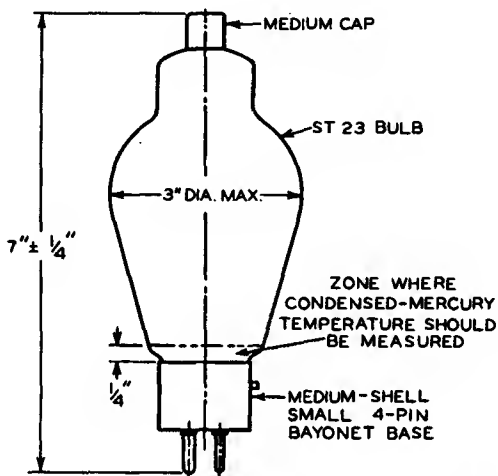
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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92CS-6743R1

MARCH 1, 1951

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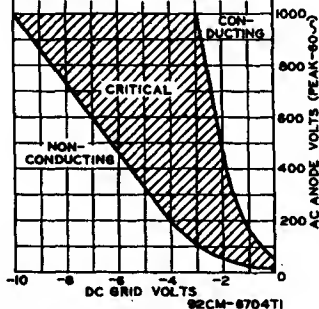
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OPERATIONAL RANGE
OF CRITICAL GRID VOLTAGE

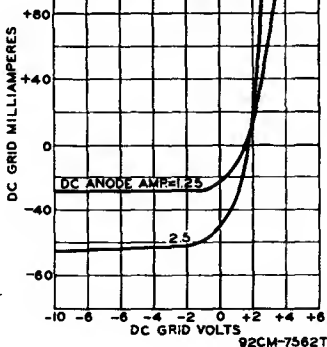
TYPE 5559

RANGE IS FOR CONDITIONS WHERE:
 $E_f = 5$ VOLTS AC $\pm 5\%$; CIRCUIT RETURNS
TO PIN N \approx 2. THE RANGE INCLUDES
INITIAL & LIFE VARIATIONS OF INDIVIDUAL
TUBES, AS WELL AS CHANGE IN CHAR-
ACTERISTICS DUE TO HEATER PHASING.
GRID RESISTOR (OHMS) = 0
COND-MERCURY TEMPERATURE = 40°C

AVERAGE GRID CHARACTERISTICS
DURING ANODE CONDUCTION

TYPE 5559

$E_f = 5$ VOLTS AC
CIRCUIT RETURNS TO PIN N \approx 2
GRID RESISTOR (OHMS) = 0
CONDENSED-MERCURY TEMPERATURE = 60°C



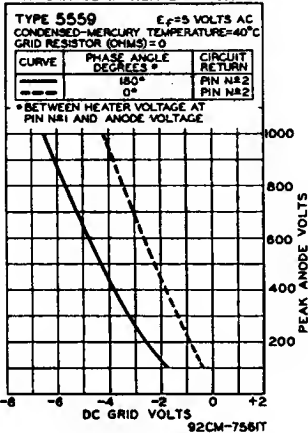
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SHIFT OF AVERAGE CONTROL CHARACTERISTIC WITH CHANGE IN HEATER PHASING



TEMP.-RISE CHARACTERISTIC

